AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1. (Previously Presented) A method for multi-reading a plurality of IDs, by which an interrogator and multiple transponders repeat queries and responses there-between in order to allow the interrogator to discriminate a unique ID given to each one of the transponders, the method comprising:

specifying, by the interrogator, a first read range of IDs in a first query; and

if the interrogator does not receive a response to the first query, or receives only a single response to the first query, transmitting, by the interrogator, a second query specifying a second read range of IDs which is twice the size of the first read range of IDs.

2. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 1, further comprising:

responding, by a transponder, with an ID of the transponder, if the transponder has an ID within the first read range of IDs;

transmitting, by the interrogator, a second query specifying a second read range of IDs which is half the size of the first read range of IDs, if the interrogator receives a plurality of responses to the first query;

reading an ID of a responding transponder, if the interrogator receives a single response to the first query; and

transmitting, by the interrogator, a second query specifying a second read range of IDs having a starting ID differing from a starting ID of the first read range of IDs, if the interrogator does not receive a response to the first query or receives only a single response to the first query,

wherein the method is repeated until a search for all possibly existing IDs has been completed.

3. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 14, further comprising:

responding, by a transponder, if the transponder has an ID within the first read range of IDs;

transmitting, by the interrogator, a second query specifying a second read range of IDs which is half the size of the first read range of IDs, if the interrogator receives a response to the first query and the first read range of IDs comprises more than a single ID;

reading an ID of a responding transponder, if the first read range of IDs comprises a single ID; and

transmitting, by the interrogator, a second query specifying a second read range of IDs having a starting ID differing from a starting ID of the first read range of IDs, if the interrogator does not receive a response to the first query, or if the interrogator receives a response to the first query and the first read range comprises a single ID,

wherein the method is repeated until a search for all possibly existing IDs has been completed.

4. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 2, wherein the sizes of the first and second read ranges are defined by powers of two, and the first and second read ranges are specified by one of a start value and an end value, and an exponent value which sets a size of a read range of IDs.

5. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 4, wherein a reduction of a size of a read range of IDs is performed by reducing the exponent value.

6. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 4, wherein an expansion of a read range of IDs is performed by increasing the exponent value.

7. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 4, wherein an end value E of a read range is calculated by the formula $E=S+2^e-1$ when the read range is specified by a start value S of the read range and an exponent value e.

8. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 4, wherein a start value S of a read range is calculated by the formula $S=E-2^e+1$, when the read range is specified by an end value E of the read range and an exponent value e.

9. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 3, wherein the sizes of the first and second read ranges are defined by powers of two, and the first and second read ranges are specified by one of a start value and an end value, and an exponent value which sets a size of a read range of IDs.

10. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 9, wherein a reduction of a size of a read range of IDs is performed by reducing the exponent value.

11. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 9, wherein an expansion of a read range of IDs is performed by increasing the exponent value.

12. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 9, wherein an end value E of a read range is calculated by the formula $E=S+2^e-1$ when the read range is specified by a start value S of the read range and an exponent value e.

13. (Previously Presented) The method for multi-reading a plurality of IDs as described in claim 9, wherein a start value S of a read range is calculated by the formula $S=E-2^e+1$, when the read range is specified by an end value E of the read range and an exponent value e.

14. (Previously Presented) A method for multi-reading a plurality of IDs, by which an interrogator and multiple transponders repeat queries and responses there-between in order to allow the interrogator to discriminate a unique ID given to each one of the transponders, the method comprising:

specifying, by the interrogator, a first read range of IDs in a first query; and

if the interrogator does not receive a response to the first query, or if the interrogator receives a response to the first query and the first read range comprises a single ID, transmitting, by the interrogator, a second query specifying a second read range of IDs which is twice the size of the first read range of IDs.

15. (New) An interrogator that multi-reads a plurality of IDs and discriminates a unique ID given to each of a plurality of transponders, the interrogator being configured to:

specify a first read range of IDs in a first query, and

if the interrogator does not receive a response to the first query, or receives only a single response to the first query, transmit a second query specifying a second read range of IDs which is twice the size of the first read range of IDs.

16. (New) An interrogator that multi-reads a plurality of IDs and discriminates a unique ID given to each of a plurality of transponders, the interrogator being configured to:

specify a first read range of IDs in a first query, and

if the interrogator does not receive a response to the first query, or if the interrogator receives a response to the first query and the first read range comprises a

single ID, transmit a second query specifying a second read range of IDs which is twice the size of the first read range of IDs.

17. (New) A computer-readable medium that stores a program for multi-reading a plurality of IDs by an interrogator and discriminating a unique ID given to each of a plurality of transponders, comprising:

code for specifying a first read range of IDs in a first query, and

code for transmitting a second query specifying a second read range of IDs which is twice the size of the first read range of IDs, if the interrogator does not receive a response to the first query, or receives only a single response to the first query.

18. (New) A computer-readable medium that stores a program for multi-reading a plurality of IDs by an interrogator and discriminating a unique ID given to each of a plurality of transponders, comprising:

code for specifying a first read range of IDs in a first query, and

code for transmitting a second query specifying a second read range of IDs which is twice the size of the first read range of IDs, if the interrogator does not receive a response to the first query, or if the interrogator receives a response to the first query and the first read range comprises a single ID.